

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-251253

(43)Date of publication of application : 17.09.1999

51)Int.Cl.

H01L 21/205

H01L 31/02

H01L 33/00

H01S 3/18

21)Application number : 10-052573

(71)Applicant : NICHIA CHEM IND LTD

22)Date of filing : 05.03.1998

(72)Inventor : OZAKI NORIYA
KIYOHISA HIROYUKI
NAKAMURA SHUJI

54) NITRIDE SEMICONDUCTOR SUBSTRATE AND MANUFACTURE THEREOF

57)Abstract:

PROBLEM TO BE SOLVED: To provide a method for manufacturing a nitride semiconductor substrate having good crystallinity, and a nitride semiconductor substrate.

SOLUTION: By providing a first step of growing an underlying layer 2 made of a first nitride semiconductor on a different-type substrate 1, made of a material different from a nitride semiconductor and not growing a nitride semiconductor on the surface of the underlying layer 2 or partially forming a protective film 10 which is hard to grow, a second step of growing a second nitride semiconductor 3 from the underlying layer 2 up to the top of the protective film 10 by a metal organic vapor phase growth method after the first step, and a third step of growing a third nitride semiconductor 4 having a thickness greater than that of the second nitride semiconductor 3 on the second nitride semiconductor 3 by a hydride vapor phase growth method after the second step, a crystal defect in the nitride semiconductor substrate is stopped halfway through the growth.



LEGAL STATUS

Date of request for examination]

Date of sending the examiner's decision of rejection]

Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision
of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office